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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/828,382

04/20/2004

Michael Nutt

BBM-145US

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23122

7590

07/13/2007

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VALLEY FORGE, PA 19482-0980

EXAMINER

ROE, JESSEE RANDALL

ART UNIT

PAPER NUMBER

1742

MAIL DATE

DELIVERY MODE

07/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/828,382	Applicant(s) NUTT ET AL.	
	Examiner Jessee Roe	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 23-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims Status

Claims 1-22, drawn to a titanium alloy, are currently under examination. Claims 23-34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method of imparting wear resistance, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 12 April 2007. Applicant's election of a titanium alloy without traverse for claims 1-22 in the reply filed on 12 April 2007 is acknowledged.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Means-Plus-Function Language

Instant claim 1 contains means-plus-function format and has been interpreted as follows:

"wear-resistance means for making the titanium device wear-resistant" is NOT in proper means-plus-function format and does not invoke 35 U.S.C. 112, 6th paragraph since the claim is neither an apparatus claim nor a process claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 15-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Beals et al. (US 5,704,239).

In regards to claims 1-6 and 15-22, Beals et al. ('239) disclose wherein a titanium alloy (Ti-6Al-4V) would be used for hip, knee, and spinal implants (col. 3, lines 5-67). The titanium alloy orthopedic implant would be shot peened with ceramic beads by high pressure air to apply sufficient wear resistance to the titanium alloy (col. 3, lines 5-67 and col. 2, lines 14-22).

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Davidson (US 5,498,302).

In regards to claims 1-6, Davidson ('302) discloses wherein a titanium alloy (Ti-6Al-4V) alloy would be a preferred implant metal (col. 4, lines 7-31). The types of implants include cardiovascular and orthopedic implants (col. 2, lines 11-

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16). Wear resistance would be improved by internal oxidation (col. 5, line 40 – col. 6, line 16).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson (US 5,498,302).

In regards to claims 7-9, Davidson ('302) discloses a wear resistant and surface hardened titanium alloys that would be used as an implant device (col. 1, lines 11-20). Davidson ('302) teaches wherein the implants device's surface hardness would exceed 50 HRC for titanium alloys, the alloys would typically have a hardness (including the core) prior to treatment of up to 40 HRC, and the increased surface hardness would extend to levels of 50 microns or more depending upon gas concentration, time, temperature, and alloy composition, which overlaps the surface hardness depth and hardness of the instant invention, which is a prima facie case of obviousness (col. 2, line 47 – col. 3, line 16). See MPEP 2144.05 I and MPEP 2144.05 II. It would have been obvious to one of ordinary skill in the art to select the claimed hardness values and hardness depths from the hardness values and hardness depths disclosed by Davidson

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('302), because Davidson ('302) discloses the same utility throughout the disclosed ranges.

In regards to claims 10-12, Davidson ('302) discloses wherein the hardness of a Ti-6Al-4V alloy device decreases from the surface to the core (Figure 3).

In regards to claims 13-14, Davidson ('302) further discloses wherein the implants would be used as orthopedic implants and orthopedic implants (col. 2, lines 11-16).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessee Roe whose telephone number is (571) 272-5938. The examiner can normally be reached on Monday-Friday 7:30 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JR

ROY KING 
SUPERVISORY PATENT EXAMINER
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